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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,809	09/22/2005	Edmond Kenneth Joseph	4589-PAUPCUS	9669
29370	7590	10/05/2007		
ROBERT A. PARSONS 4000 N. CENTRAL AVENUE, SUITE 1220 PHOENIX, AZ 85012			EXAMINER WONG, ERIC K	
			ART UNIT 2883	PAPER NUMBER
			MAIL DATE 10/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/526,809

Applicant(s)

JOSEPH ET AL.

Examiner

Eric Wong

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,6,8-12,15,16,18-24,28,31,32 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,6,8-12,15,16,18-24,28,31,32 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims rejected in the prior office action have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 6, 8, 12, 18, 32, 35-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Number 5,937,127 to Zarian et al (hereinafter Zarian) and in view of United States Patent Number 4,466,697 to Daniel.

Zarian discloses in figures 4-5 and 6, a side-scattering light guide, comprising:

- A transparent optically homogeneous elongate core (42) to transmit light along the core from end to end;
- An optically transmitting sheath having a lower refractive index than the core, surrounding and in contact with the sides of the core (column 4, lines 24-52);
- Particles within the core (column 3, lines 15-19), the particles being transparent, high optical transmittance low back reflectance and low, and being distributed to scatter light being transmitted along the core so that at least some of the scattered light exits the sides of the core, and;

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A jacket of diffusing material (multiple jackets disclosed) arranged to intercept scattered light exiting the sides of the core (28; figure 4).

As to claim 6, the sheath is transparent.

As to claim 8, figure 4 depicts a sheath formed with a jacket.

As to claim 12, the jacket partially surrounds the core in figure 4.

As to claim 18, the jacket is made of reflective materials or films.

As to claim 32, the jacket is a diffractive element.

As to claims 35-36, the material as claimed is disclosed.

As to claim 38, silicone may be used.

However, Zarian fails to specifically disclose diffuser particles. Examiner notes that although Zarian does not specifically disclose diffuser particles to diffuse light, the invention uses a medium to diffuse light.

Daniel discloses diffuser particles (40) having refractive indices which are close to the refractive index of a waveguide core (diffuser "bubbles" are made of the from the same material of the core).

Since Zarian and Daniel are both from the same field of endeavor, the use of diffuser particles having similar refractive indices as a core in Daniel would have been recognized in the pertinent art of Zarian.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the diffuser particles of Daniel in the invention of Zarian to produce light emission that is more efficient throughout the length of the light pipe or waveguide.

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4. Claims 3, 5, 9-11, 15-16, 19-21, 28, 31, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zarian in view of Daniel (hereinafter ZID) as applied to claims above. ZID discloses the invention as claimed except for the variables in size, roughness and the amount of transmittance/reflectance. It is respectfully noted that applicant has not appeared to have disclosed any criticality in each of the different characteristics in Applicant's specification. It is further noted that ZID does not specifically limit the use of different materials or sizes. By merely replacing one material over the other or varying the size is a general engineering practice to achieve the desired results for an intended use of a product. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the materials as claimed, since such a modification would have involved a mere change in size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

As to preferred materials, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

It is further noted that the use of air or a volume of free space as a cladding layer is well known in the optical fiber art (See United States Patent Number 7,010,212) to prevent optical errors as the refractive index of a free volume of air is nearly 1.

Examiner's contention of this obvious choice in design can be overcome if Applicant establishes unexpected results by arranging or using a specific size of the particles/jacket as claimed.

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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. United States Patent Number 4,916,359.
- b. United States Patent Number 7,010,212.
- c. United States Patent Application Publication 2006/0153511.
- d. United States Patent Application Publication 2005/0141843.
- e. United States Patent Number 4,733,929.
- f. United States Patent Number 4,422,719.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.

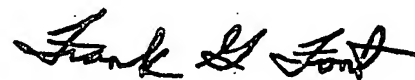
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

//Eric Wong//

EW



Frank G. Font
Supervisory Patent Examiner
Technology Center 2800